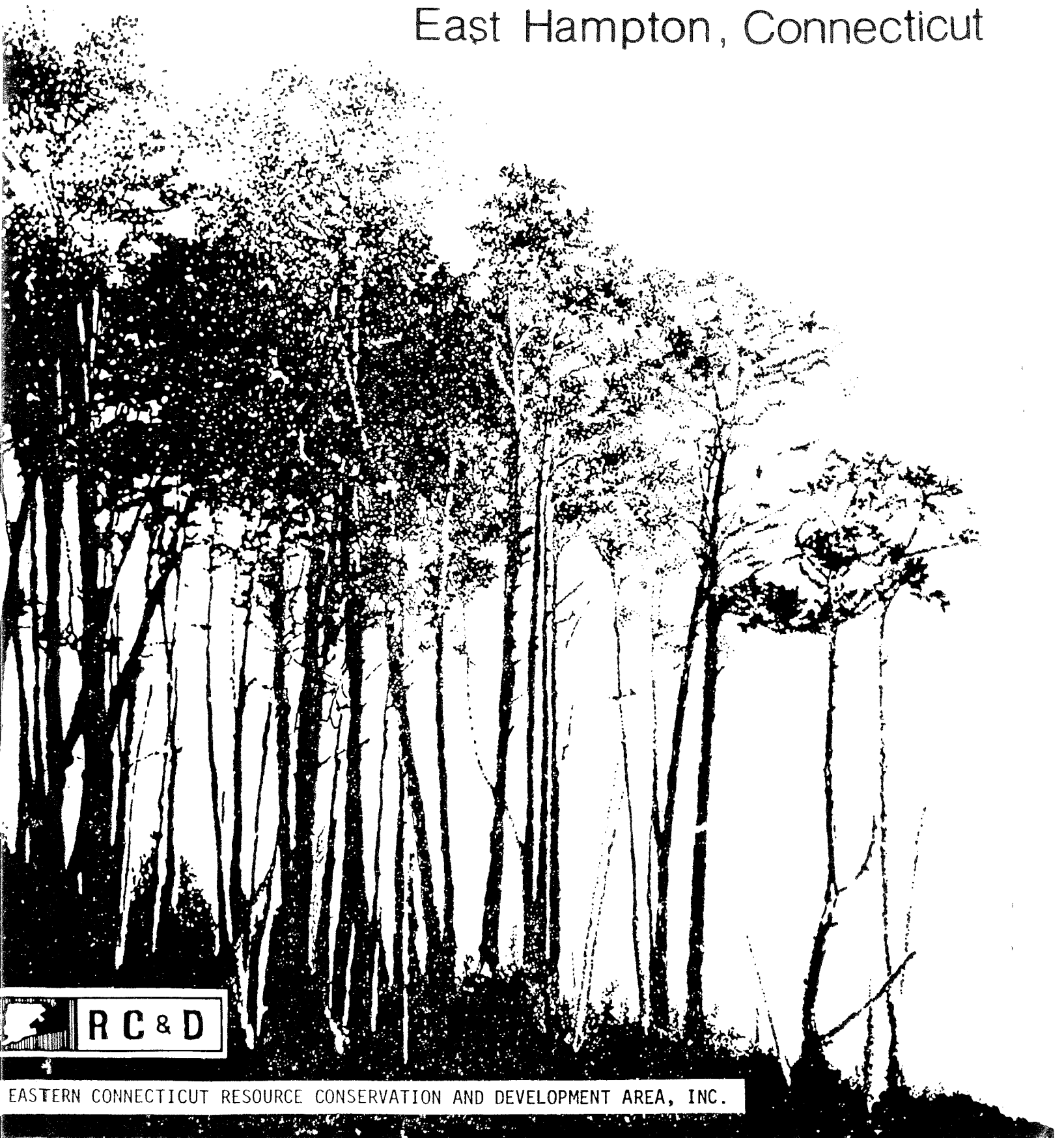
Environmental Review Team Report

# Town Garage Site

## East Hampton, Connecticut



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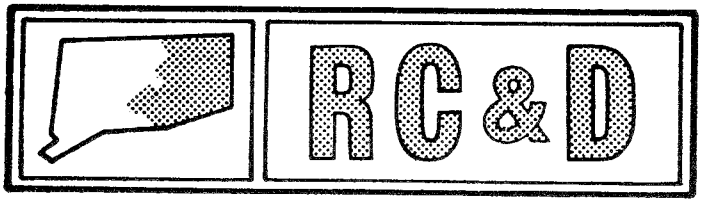
EASTERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT AREA, INC.

Environmental Review Team
Report

# Town Garage Site

## East Hampton, Connecticut

May, 1984

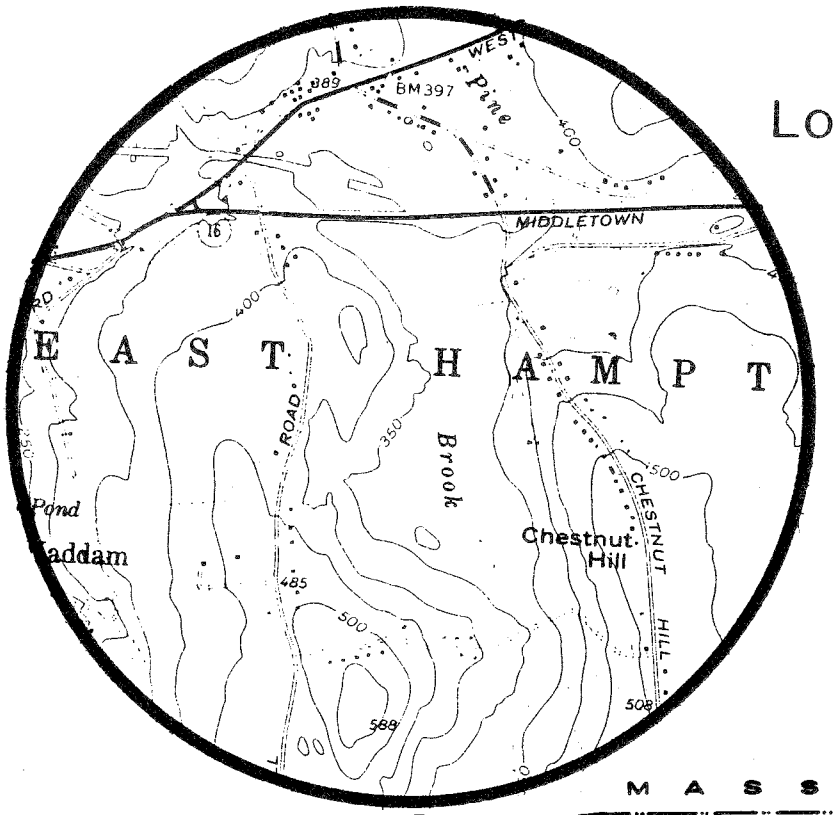


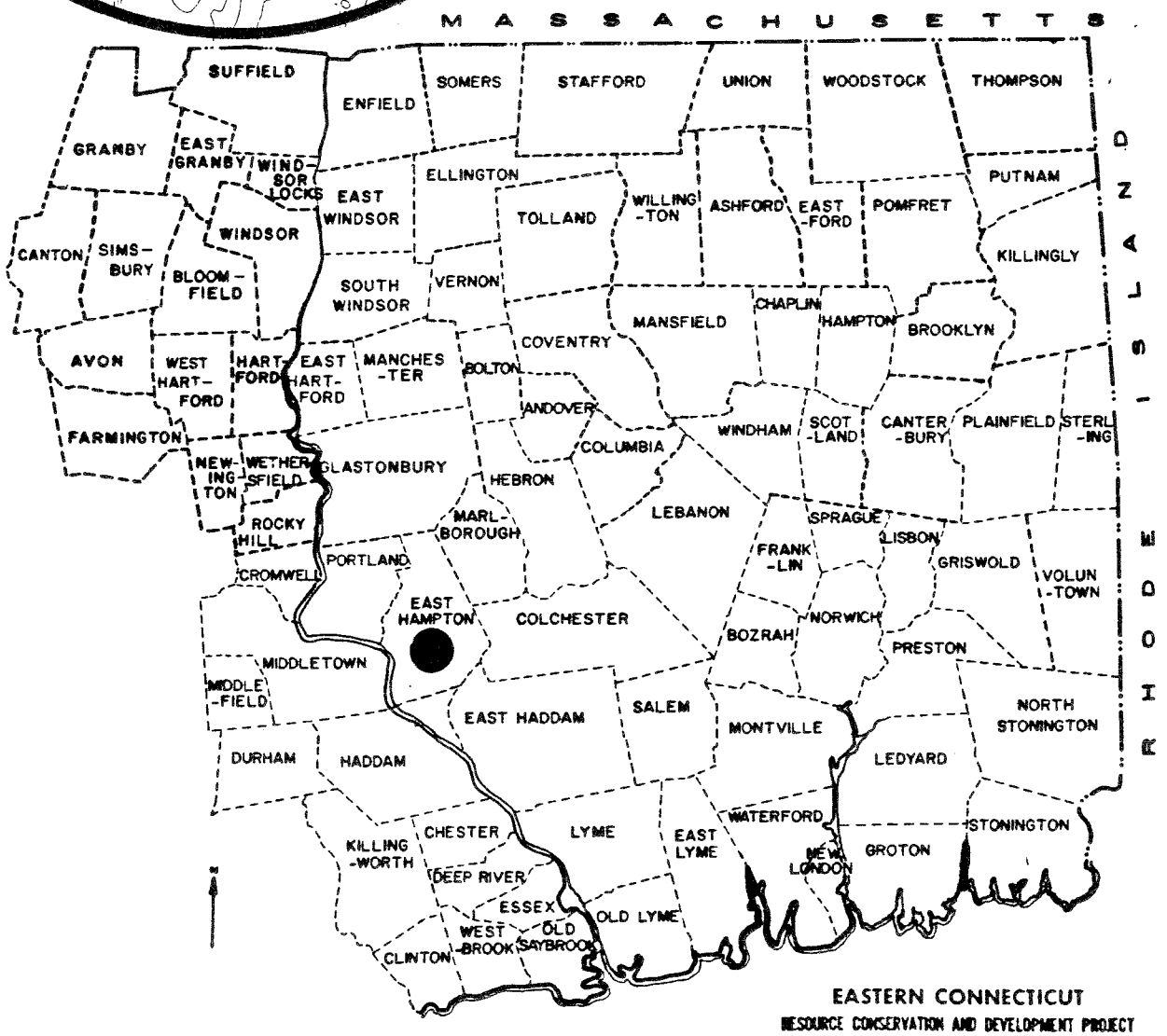

Eastern Connecticut Resource Conservation & Development Area

Environmental Review Team
PO Box 198
Brooklyn, Connecticut 06234

# Location of Study Site

TOWN GARAGE SITE
EAST HAMPTON, CONNECTICUT



# ENVIRONMENTAL REVIEW TEAM REPORT
# ON
# TOWN GARAGE COMPLEX
# EAST HAMPTON, CONNECTICUT

This report is an outgrowth of a request from the East Hampton Planning and Zoning Commission to the Middlesex County Soil and Water Conservation District (S&WCD). The S&WCD referred this request to the Eastern Connecticut Resource Conservation and Development (RC&D) Area Executive Committee for their consideration and approval. The request was approved by the RC&D Executive Committee and the measure was reviewed by the Eastern Connecticut Environmental Review Team (ERT).

The soils of the site were mapped by a soil scientist from the United States Department of Agriculture, Soil Conservation Service (SCS). Reproductions of the soil survey map, a table of soils limitations for certain land uses and a topographic map showing property boundaries were distributed to all Team members prior to their review of the site.

The ERT that field-checked the site consisted of the following personnel: Pat Scanlon, District Conservationist, Soil Conservation Service (SCS); Bill Warzecha, Geologist, Connecticut Department of Environmental Protection (DEP); Rob Rocks, Forester, DEP; Lisa Lasorsa, Regional Planner, Midstate Regional Planning Agency; John Rook, Biologist, Chuck Phillips, Fisheries Biologist, DEP; and Jeanne Shelburn, ERT Coordinator, Eastern Connecticut RC&D Area.

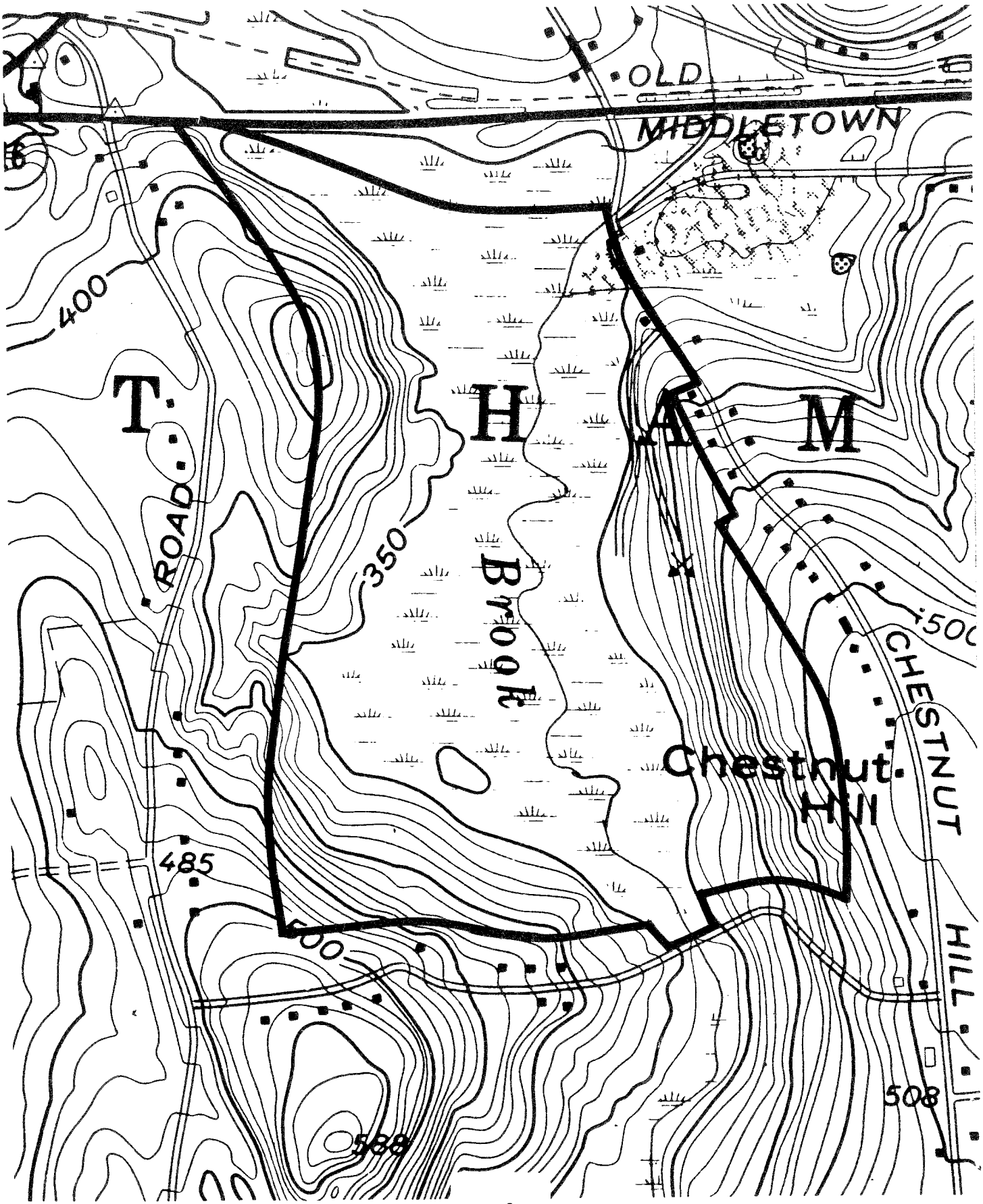
The Team met and field checked the site on Thursday, January 18, 1984. Reports from each contributing Team member were sent to the ERT Coordinator for review and summarization for the final report.

This report is not meant to compete with private consultants by supplying site designs or detailed solutions to development problems. This report identifies the existing resource base and evaluates its significance to the proposed development and also suggests considerations that should be of concern to the developer and the Town of East Hampton. The results of this Team action are oriented toward the development of a better environmental quality and the long-term economics of the land use.

The Eastern Connecticut RC&D Area Committee hopes that this report will be of value and assistance in making any decisions regarding this particular site.

If you require any additional information, please contact: Ms. Jeanne Shelburn, Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, P.O. Box 198, Route 205, Brooklyn, CT 06234; 774-1253.

| Topography | Site Boundary | 0 660' scale | N |
|---|---|---|---|



# INTRODUCTION

The Eastern Connecticut Environmental Review Team was asked to prepare an environmental assessment for location of a Town garage facility on a parcel of Town-owned property in East Hampton. The 165± acre parcel is located south and west of the intersection of Old Middletown Avenue and Chestnut Hill Road. The Town wishes to use a small portion of this site for development of the garage complex. No plans have been prepared for the garage at this time, however, the Team was informed on the date of the field review that a road salt storage and mixing area would be included in the complex.

This site was originally purchased with federal funds to remain as public open space and for location of a public water supply well. The property is fairly flat and is entirely forested at present. Pine Brook and a large associated wetland bisects the site. Slopes become more moderate to steep at the eastern and western boundaries of the property.

Team members have provided a detailed discussion of the natural resource base of the site and the limitations that it may pose to development of the Town garage complex in the following sections of this report. However, serious consideration should be given to location of a public water supply well on this site, and the Pine Brook Acquifer Protection Zone. Location of a garage complex with its possible associated pollutants (salt, hydrocarbon spills) on this site, may not be consistent with the Town's natural resource protection goals.

# Surficial Geology

0 660
scale

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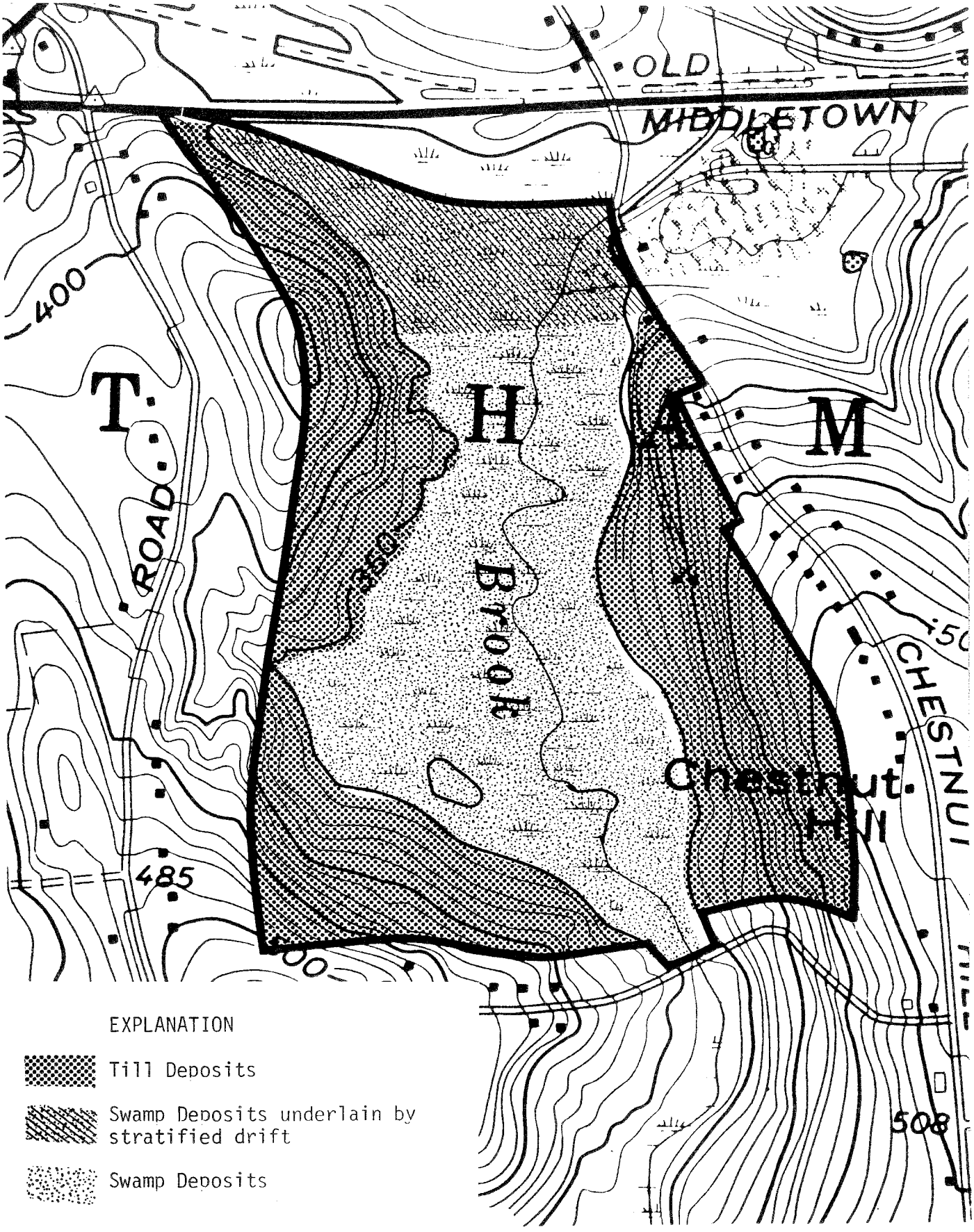

# ENVIRONMENTAL ASSESSMENT

## GEOLOGY

The parcel of land, ±165 acres in size, is located in the west central portion of Town. It is bordered on the west by Hog Hill Road, on the north by Middletown Avenue (Rte. 17), on the east by Chestnut Hill Road and on the south by Goff Road. Pine Brook, along with its accompanying wetlands, bisects the central portions of the property north to south. Slopes are generally moderate to steep along the eastern and western limits of the site. Some gentle slopes and relatively flat areas may be found along the outer fringes of the wetlands.

Only preliminary geologic information is presently available for the Middle Haddam topographic quadrangle. This information is available for review purposes only at Department of Environmental Protection's Natural Resource Center in Hartford.

Bedrock exposures are visible mainly along the western limits of the property. Based on preliminary bedrock geologic information by G. P. Eaton and J. L. Rosenfeld, bedrock underlying most of the site has been classified as gneiss. A "gneiss" is a crystalline, metamorphic rock. It is a coarse grained rock in which layers of light colored granular mineral grains alternate with bands of dark, elongate mineral grains. The chief minerals which compose gneisses are quartz and feldspar. Other minerals include biotite, hornblende and sillimanite.

Other rock types found on the property include schists and pegmatites. Schists are also crystalline, metamorphic rocks, characterized by platy or flaky minerals which have aligned to form wavy surfaces that may be parted or split relatively easily. These rocks underlie and/or crop out along the western limits of the property.

Outcrops found scattered along the western limits of the parcel are composed primarily of a resistant, coarse grained rock which is rich in the minerals quartz, microcline, feldspar, muscovite, and biotite. They are referred to as pegmatite and are characteristically light colored (pink to white).

Depth to bedrock probably ranges between zero where rock outcrops along the western limits, and ±60 feet in the wetland area in the north central portions of the site. The latter is based on the logs of test wells drilled in the northern and north central portions of the site. (Source: Hydrogeologic Data Lower Connecticut River--Connecticut Water Resources Bulletin #30)

Overlying bedrock in the upland areas along the eastern and western boundaries consists mainly of a thin blanket of glacial sediment referred to as till. Till was deposited directly from the glacier ice. It is commonly referred to as "hardpan" and is composed of rock particles ranging in size from clay to boulders. The till is non-stratified and non-sorted due to its mode of deposition. The glacier ice collected, transported, abraided, crushed and deposited rock fragments indiscriminantly during its advance and retreat without subsequent reworking by meltwater streams. Commonly, till is sandy, stony and somewhat friable in the upper few feet while at depth it becomes less stony, siltier and tightly compact.

Another glacial sediment deposited on the site is stratified drift. These deposits underlie the wetland area throughout the central portions of the site. The main components of the stratified drift are sand and gravel which were washed by meltwater streams from glacier ice. Because the components of stratified drift were transported and deposited by meltwater streams, they are generally sorted by grain size and are layered (stratified). Based on logs of test wells drilled in the wetland in the northern portions of the site, the thicknesses of the sand and gravel deposits are about 30 feet. (Source: Connecticut Water Resources Bulletin #30)

At the request of the East Hampton Water and Sewer Authority, Geraghty and Miller, Inc., consulting geologists, conducted a groundwater resource investigation at four sites in the Town of East Hampton during the period of 1967-1971.[1] The purpose of the investigation was to locate areas which would be suitable for development of a community water supply.[2]

One of the four sites investigated included the northern half of Pine Brook Valley which comprises the subject parcel.[3] The area explored in Pine Brook Valley is approximately 600 to 700 feet west and northwest, respectively, of the barn off of Chestnut Hill Road (potential Town garage site). Based on the final report published in 1972, the stratified drift deposits in the exploration area "had a very good groundwater potential" and "was suitable for development of a public water supply."[4]

In addition, the report concludes that the estimated maximum groundwater potential of the sand and gravel aquifer would be about one million gallons per day.[5] The potential of any sand and gravel (stratified drift) aquifer in a particular location often depends on the texture and thickness of the deposits at that location, the proximity to streams and the size of those streams, as well as other hydrogeologic factors. As part of the study, water samples from test wells were collected and analyzed for water quality. The results proved to be good.[6]

Overlying the stratified drift deposits throughout the central portions of the site are swamp sediments. Swamp sediments consists of decayed organic material interbedded with layers of silt, sand, clay, and gravel. Swamp sediments on the site are identified by the symbols Aa (Adrian Muck), and Rb (Raypol) on the accompanying soils map. Wetlands account for approximately 111 acres or 67% of the site.

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[1] Investigation of Groundwater Resources for the Town of East Hampton, Connecticut 1967-1971, Geraghty and Miller, Inc., (Port Washington, N.Y., June 1972), p. 1.

[2] Ibid.

[3] Ibid., p. 3.

[4] Ibid., p. 4.

[5] Ibid.

[6] Ibid.

At the pre-review meeting, Team members were asked by Town officials to comment on the suitability of constructing a Town garage on a small portion of the ±165 acre parcel. The potential site, which is ±15 acres in size, is triangular in shape and is located in the northeast quarter of the parcel. It is bordered to the west by wetlands and to the east by Chestnut Hill Road. A barn is located at the northern point of the site (see topographic map).

The surficial (overburden) deposits overlying bedrock on the potential site are entirely till. Thickness of the till probably does not exceed 10 feet. It may be thinner in the excavated areas in the southern portion of the site where some surficial material has been mined. No bedrock outcrops were visible the day of the review. It is presumed that gneissic rocks underlie the entire site.

From a geological perspective, the most limiting factors in terms of constructing a Town garage would be the presence of till-based soils. Seasonally high ground water tables and stoniness may be experienced with the till soils. These limitations (compact till, high groundwater) would probably weigh heaviest on building foundations and road installations. However, with good planning and proper engineering, these limitations could be surmounted. Steep slopes, which predominate along the eastern limits of the site should be avoided if possible. Since public sewers are accessible to the site, the need for on-site sewage disposal systems will not be necessary. This should reduce the risk of potential groundwater contamination.

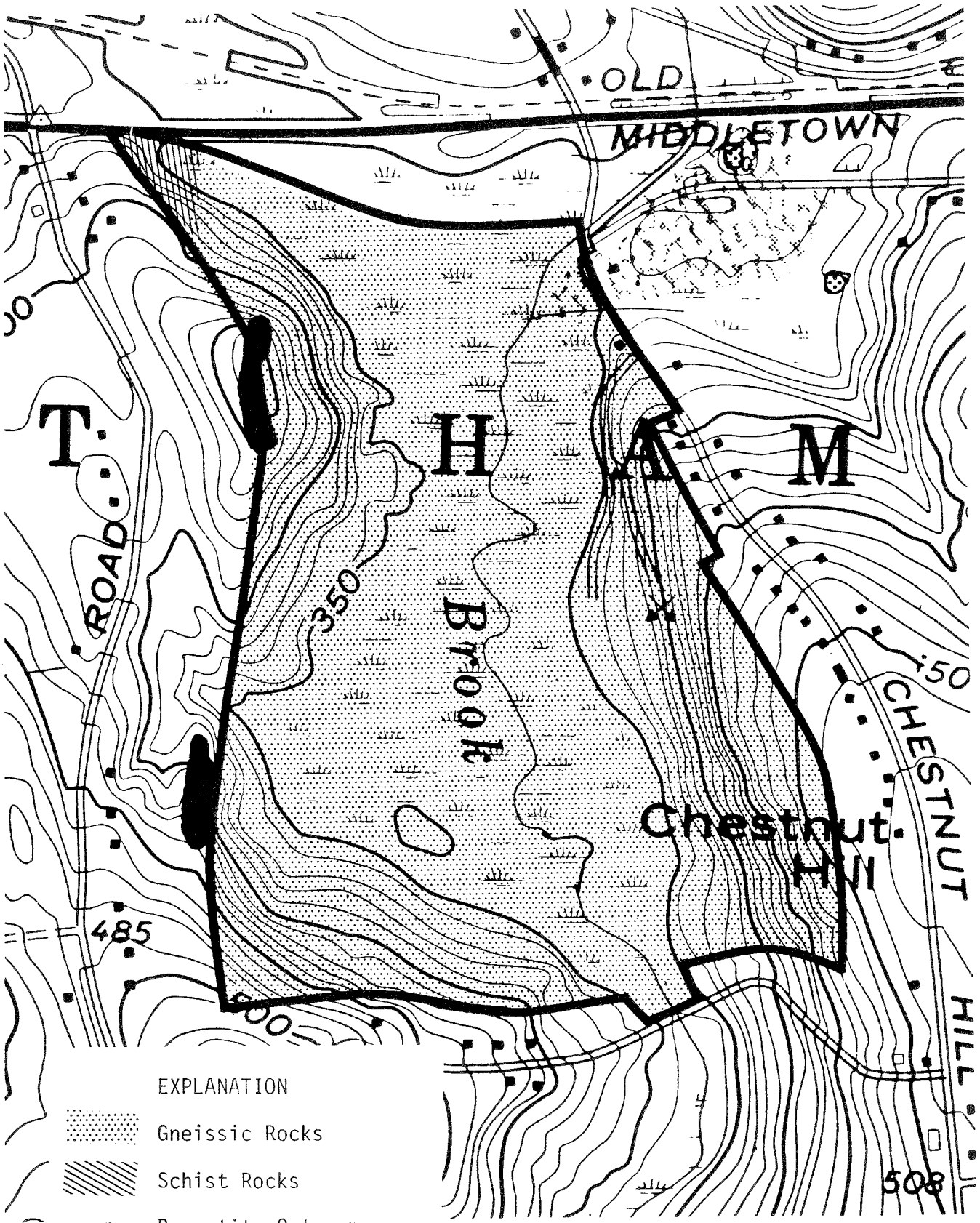
If a well was desired, the underlying bedrock would probably be tapped for a water source. It seems likely that a yield of 2 to 3 gallons per minute could be expected. This yield would probably meet the needs of the Town garage providing these needs are restricted to uses a single family home would have.

As mentioned earlier, the wetland area west and northwest of the potential garage site was determined to have "very good groundwater potential" and was "suitable for development of a public water supply."[7] Because the subject site lies within the watershed of the stratified drift deposits, the use of the site as a Town garage may influence the quality of any groundwater withdrawn from the aquifer. This should be of utmost concern to the Town since potential contaminants such as road salt, organic compounds, gasoline or other hydrocarbons and chemical substance (i.e., solvents, herbicides, pesticides, etc.) which are commonly stored and sometimes disposed of carelessly in or near town garages, may easily find their way into the groundwater aquifer. If this occurred, certain types of the contaminants mentioned above may seriously degrade the water quality of the aquifer and possibly render the water source unusable for potable purposes. It should be pointed out the Connecticut Department of Transportation has discovered that high sodium and chloride problems are very likely to occur where road salt storage facilities are located near swampy areas if protective measures are not employed.[8] It has been found that wetlands do not allow flushing or

[7] Ibid., p. 13.

[8] "Municipal Road Salt Storage and Application Procedures in the Thames River Basin," Connecticut 208 Water Quality Planning Program, (Spring-Summer 1981), p. 10.

# Bedrock Geology



drainage of the salt.[9] As a result,[10] a buildup of the salt may adversely affect wells in close proximity to the swamp.

Because of Pine Brook Valley's potential for serving a public water supply, the Town should consider its long range needs in terms of a public water supply before making plans for the use of the site as a Town garage. An alternative the Town may wish to consider is to locate the garage in another part of Town, thereby preserving the subject parcel in a "pristine" state. If the Town decides to develop Pine Brook Valley as a public water supply site at some point in the future, it will be necessary to implement measures to protect the entire Pine Brook watershed (see drainage map). Examples of measures that could be implemented include: (1) minimizing road salt application on state and local roads within the watershed; (2) conduct sanitary surveys within the watershed to ensure that on-site sewage systems are functioning properly and not contaminating the groundwater; and (3) adopt an aquifer protection ordinance and/or program which would restrict the type and use of property within the watershed to non-pollution generating forms.

It is recommended that the Department of Environmental Protection's Water Compliance section be contacted for questions regarding groundwater or aquifer protection ordinances.

## HYDROLOGY

Surface runoff from the site drains almost entirely to the central portions of the site through which Pine Brook flows. The only other major watercourse on the parcel is an unnamed tributary of Pine Brook in the northeast section. The brook originates in a wetland area east of Chestnut Hill Road. From the wetland, it flows westward for approximately 700 feet passing under Chestnut Hill Road until it merges with Pine Brook. Pine Brook meanders through the central portion of the site in a southerly direction enroute to the Salmon River. It appears there may be a few intermittent drainage channels in the west central sections of the parcel. They flow southeastward into the wetlands.

With the exception of the stratified drift deposits in the central portion of the site, geological materials (till, bedrock) on the property possess no special potential for yielding groundwater to wells. The underlying bedrock would be the most significant aquifer in the upland areas along the eastern and western limits. Bedrock transmits water by means of an interconnected system of fractures. The yield and natural quality of water withdrawn from a bedrock based well depends upon the number and size of water-bearing fractures and/or joints the well intersects, and on the mineralogy of the rock formations through which the fractures pass.

In the lower Connecticut River basin, according to Connecticut Resources Bulletin No. 31, 90% of 314 surveyed bedrock wells, tapping the type of bedrock underlying the

[9] Ibid.
[10] Ibid.

# Drainage Areas

0 2000'
scale

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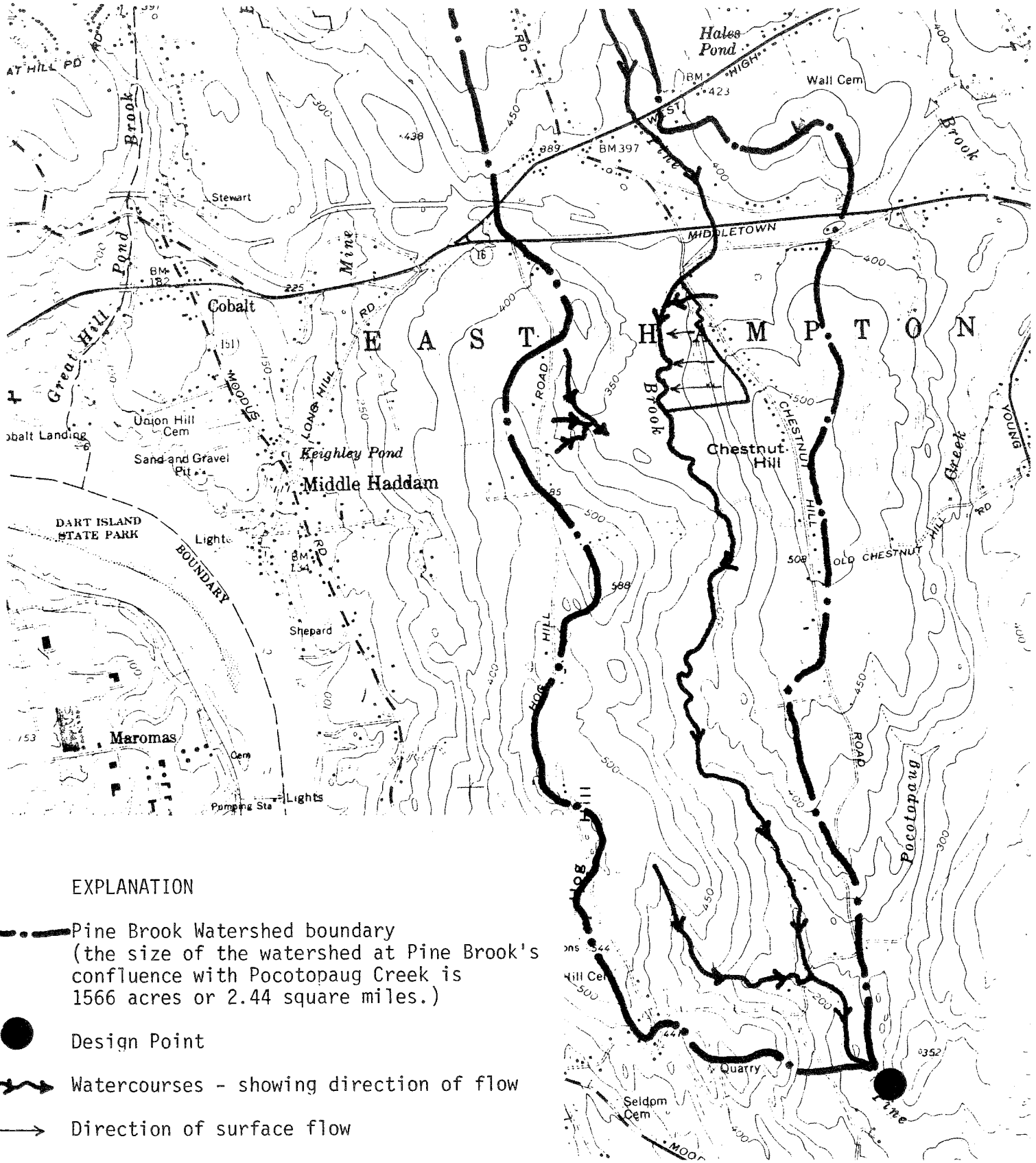



EXPLANATION

- Pine Brook Watershed boundary (the size of the watershed at Pine Brook's confluence with Pocotopaug Creek is 1566 acres or 2.44 square miles.)
- Design Point
- Watercourses - showing direction of flow
- Direction of surface flow
- Potential Garage Site

site, yielded just under 2 gallons per minute, 50% yielded 8 gallons per minute and 10% yielded about 18 gallons per minute. A yield of 3 gallons per minute would probably be adequate for most domestic uses.

## SOILS

The site consists of well drained glacial till-based upland soils on moderate to steep slopes and level, poorly and very poorly drained wetland soils along Pine Brook. A detailed soil map is included in the Appendix to this report, along with a table which provides soil limitations for development of small commercial buildings and local roads and streets.

The soil boundary lines should not be viewed as absolute boundaries, but as guidelines to the distribution of soil types on the site. The soil limitation chart indicates the probable limitations for each of the soils. However, limitations even though severe, do not preclude the use of the land for development. If economics permit large expenditures for land development and the intended objective is consistent with the objectives of local and regional development, many soils and sites with difficult problems can be used. The soils map, with the publication, "Soil Survey, Middlesex County, Connecticut," can aid in the identification and interpretation of soils and their uses on this site. "Know Your Land: Natural Soil Groups for Connecticut" can also give insight to the development potentials of the soils and their relationship to the surficial geology of the site. The publication "Understanding Soil Maps--An Explanation of the Kinds and Use of Soil Maps Along with Scale, Accuracy, and Map Detail" is also useful.

Wetland soils on the site regulated under P.A. 155 are Adrian mucks and Raypol silt loams. Adrian muck (Aa) is a nearly level, very poorly drained organic soil which forms in low depressions of outwash terraces and glacial till plains. The soil remains wet most of the year and has ponded water for several weeks from fall through spring and after heavy rains in summer. Raypol silt loams (Rb) are nearly level, poorly drained soils in depressional areas of broad outwash plains and stream terraces. This soil has a high water table at a depth of about 10 inches from fall until spring.

The Canton and Charlton very and extremely stony fine sandy loams (CcB, CcC, CdD) are gently to steeply sloping, well drained soils occurring on upland hills, ridges, and glacial till plains. Areas of this unit consist of Canton soils or Charlton soils, or both. The soils were mapped together because they have no significant differences that affect their use and management. These soils have good potential for community development. Onsite septic systems need careful design and installation. Surface stoniness is a limitation to development of these areas.

Paxton and Montauk very stony and extremely stony fine sandy loams (PdB, PeC) are well drained soils which occur on sloping to steep drumlins and glacial till plains of glaciated uplands. The very stony phase has 0.1 to 3 percent and the extremely stony phase 3 to 15 percent of the surface covered with stones and boulders. These soils have fair potential for community development due to slopes, a slowly permeable or very slowly permeable substratum and stoniness. Onsite septic systems require careful design and installation, as steep slopes of excavations slump when saturated, and foundation drains may be needed in some areas to help prevent wet basements.

Soils within the three existing cleared areas on the parcel are Canton and Charlton fine sandy loams, which have good potential for community development. Site development plans should include a sediment and erosion control plan to be implemented during construction. Connecticut's "Erosion and Sediment Control Handbook," published by the Soil Conservation Service, provides standards and specifications for both structural and vegetative practices and is available at the Middlesex County Soil and Water Conservation District office in Haddam.

## VEGETATION

This 165 acre project site may be divided into eight distinct areas. These divisions are based on the vegetation characteristics which are apparent and the management opportunities which they dictate. These areas or vegetation types are depicted on the vegetation map and are described in detail below. Management options which are needed to improve the overall quality of the forest resource are discussed with each vegetation type where implementation is feasible.

**Type A: (Mixed Hardwoods)** This 41± acre area is made up of medium quality sawtimber size white oak, black oak, black birch, red maple and American beech with occasional red oak, tulip tree and sugar maple present where adequate moisture is available. The understory vegetation includes oak, ash and sugar maple seedlings along with maple-leaved viburnum, highbush blueberry, sweet pepperbush, witch hazel and occasional "old field" remnants including eastern red cedar, grey birch and barberry. Ground cover consists of Pennsylvania sedge and club moss with scattered patches of Christmas fern. The trees in this area are declining in health and vigor. Many oak have died, weakened by gypsy moth defoliation. Many other trees have open seams near the butt, ice damaged broken tops and dying crowns. The area is crowded but the forest is losing its productive capacity and is very susceptible to further degradation caused by insects and disease. Regeneration of the forest in this area would be appropriate at this time. The presence of adequate numbers of desirable tree saplings to become the new forest, allow several regeneration options. First and most controversial would be patch clear cuts, where all the trees over 2 1/2 inches in diameter at breast height (DBH) are removed in blocks over half of the area. The remaining half of the area would be harvested in the same manner within about 10 years. This harvest would quickly allow the new forest of seedlings to become the main stand. Unfortunately, this technique leaves the forest looking very disturbed for many years. The second option would be to remove about half of the volume evenly throughout the area. This is called a shelterwood regeneration harvest and should remove the poorest quality trees. The best half of the sawtimber-size trees should be left as a nurse crop for the young forest growing in the understory. After a shelterwood harvest, the forest will still look like a "forest." The total volume throughout this area is approximately 3500 board feet per acre (BF/AC). No more than 1750 BF/AC should be removed during this harvest. In about 10 to 15 years following this harvest a final harvest should be implemented, removing the sawtimber size trees.

**Type B: (Hardwood Swamp)** Approximately 40 acres of this parcel is over-stocked with pole-size red maple and widely scattered black gum, white ash and yellow birch. The shrub species which are present include highbush blueberry, sweet pepperbush, spice bush, swamp azalea, deciduous holly, hazelnut, flowering dogwood, silky dogwood, poison sumac and Nanneyberry. Ground cover vegetation is made up of sheep laurel, cinnamon fern and skunk cabbage. As a result of the trees present in this stand being over-crowded and

growing poorly, a light thinning, removing about 1/4 of the trees would be beneficial to the health and vigor of the remaining stand. Only poor quality and damaged trees should be removed. This harvest will only be feasible when the soils are frozen or extremely dry. No more than 2 or 3 cords should be removed per acre. Removing more trees than this or creating openings alongside this area may increase the chances of tree loss due to windthrow.

**Type C: (Hardwood Swamp)** This 35± area is exactly the same as the hardwood swamp described above, however, the soils are so saturated with water that only seedling to sapling size red maple and the shrub species mentioned above are able to be supported. Cinnamon fern, skunk cabbage, tussoch sedge and sphagnum moss dominate ground cover vegetation. As a result of the very poorly drained soils, this area is considered noncommercial for the production of wood products.

**Type D: (Mixed Hardwoods)** Medium quality pole to sawtimber-size black oak, red oak, white oak, black birch, red maple, sugar maple, and white ash are present in this 26± fully-stocked stand. Understory vegetation consists of maple-leaved viburnum, witch hazel, flowering dogwood, blue beech and hazelnut. Poison ivy, Christmas fern, club moss and Pennsylvania sedge form the ground cover vegetation. In order to improve health and vigor of a declining stand, establish a wider variety of species, make the forest more productive and begin a new forest on the ground, approximately half of the sawtimber-volume should be removed in a seed cut shelterwood harvest. As in area A, the best half of the sawtimber should be left as a nurse crop and also as a seed source for the new forest soon to grow in the understory. To improve species variety, a mix of tree species should be favored as a seed source. The total volume in this stand is about 3500 BF/AC and 40 more than 1800 BF/AC should be removed. In 10 to 15 years following this harvest a new forest will have been established. At that time, a final harvest should be implemented.

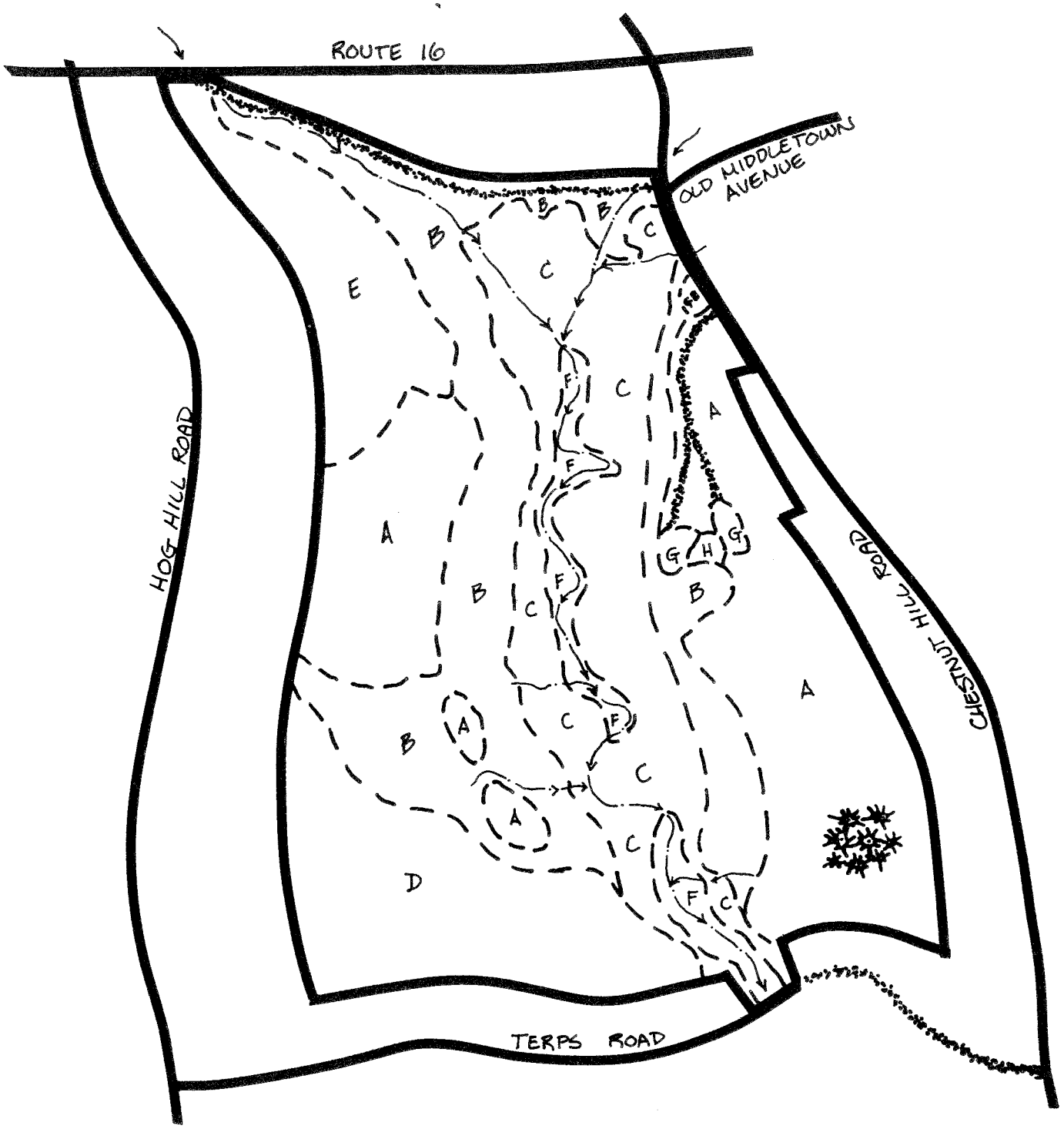
**Type E: (Mixed Hardwoods)** This 13± acre area is fully-stocked with pole to sawtimber-size black oak, white oak, scarlet oak, black birch, red maple and occasional hemlock. The understory is dominated by maple-leaved viburnum, witch hazel and mountain laurel. Ground cover consists of club moss, Christmas fern, bracken fern and rock polypody. This area would benefit by receiving an intermediate sawtimber harvest that removed approximately 1500 BF/AC or about one-third of the total volume. This harvest may, however, be unfeasible due to poor access, steep slopes and rockiness. A more indepth investigation would be necessary to determine its feasibility.

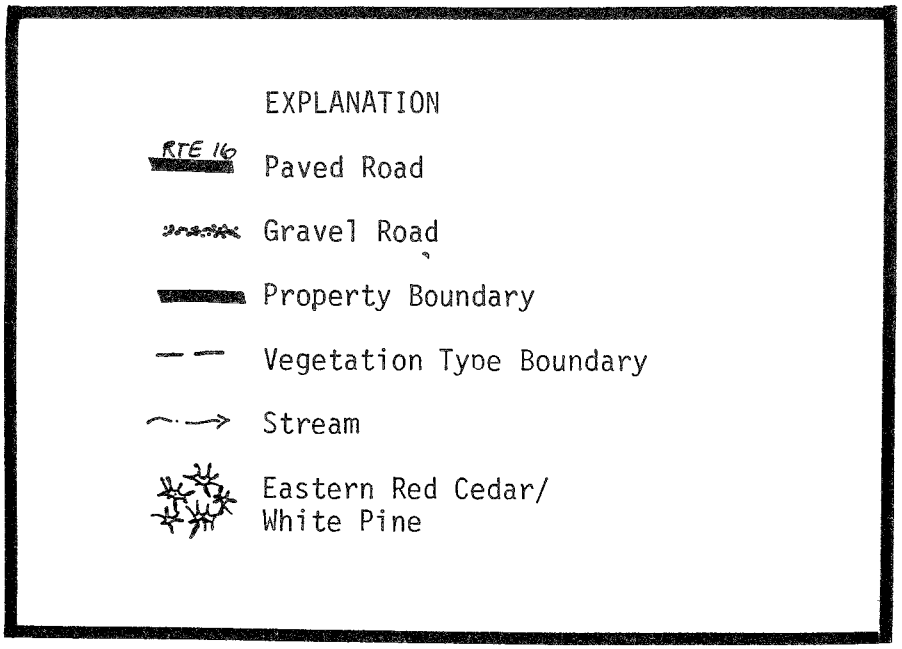
**Type F: (Open Swamp)** Directly adjacent to Pine Brook are open swamp areas totaling 8± acres. These areas are dominated by patches of silky willow, highbush blueberry, speckled alder and red maple seedlings. Cattail, tussock sedge and cinnamon fern are also present.

**Type G: (Open/Disturbed Land)** Approximately 1 1/2 acres of this tract was used for gravel excavation and later a dumping site. The woody vegetation which is now present includes black cherry and black birch seedlings, gray birch, flowering dogwood, speckled alder, sweet fern, bayberry and staghorn sumac. Habaceous vegetation is made up of grasses, goldenrod, black-eyed Susan, common mullen and spirea.

**Type H: (Plantation)** Sapling to pole-size white spruce and Norway spruce are over-stocked in the 1/2± acre area. Scattered black oak and red maple seedlings have become established where spruce have been recovered for Christmas trees. Grasses, goldenrod and poison ivy form the ground cover in this area.

# Vegetation


ROUTE 16
OLD MIDDLETOWN AVENUE
HOG HILL ROAD
CHESTNUT HILL ROAD
TERPS ROAD
A
B
C
D
E
F
G
H




VEGETATION TYPE DESCRIPTIONS*

TYPE A: (Mixed Hardwoods) 41 acres fully stocked, sawtimber size.

TYPE B: (Hardwood Swamp) 40 acres overstocked, pole size.

TYPE C: Hardwood Swamp) 35 acresfully stocked, seedling-sapling size.

TYPE D: (Mixed Hardwoods) 26 acres fully stocked, sawtimber size.

TYPE E: (Mixed Hardwoods) 13 acres fully stocked, pole to sawtimber size.

TYPE F: (Open Swamp) 8 acres seedling size.

TYPE G: (Open/Disturbed scrub-brush).

TYPE H: (Plantation) 1½ acres overstocked pole size.

* Seedling Size= Trees less than 1 inch in diameter at breast height (DBH).
Sapling Size= Trees 1 to 5 inches in DBH.
Pole Size= Trees 5 to 11 inches in DBH.
Sawtimber Size= Trees 11 inches or greater in DBH.

The above suggested management practices to improve present forest conditions can occur all at once in a short time period, or can be spread out over 10 years in several operations. Each of these two options have advantages and disadvantages. Should the decision be made to have several harvests in a short period of time, the Town may wish to hire the services of a private forester to mark and oversee the harvests. If the Town were to have several small harvests spread out over 10 years, the Middlesex County Service Forester with DEP would be available to help mark the trees to be removed. In either case, the trees to be removed should be marked by a qualified forester.

Use of a small portion of this site for the construction of a Town garage will have some impact on the vegetation which is present. The least amount of impact would, however, occur if areas G and H were chosen for this development, as these areas have already been disturbed. Clearing and grading in these areas will not destroy valuable vegetation.

If salt is stockpiled at the garage site, it should be covered so that rain water does not wash it into the surrounding area. The red maple which is present in the adjacent hardwood swamp areas are extremely intolerant of even low levels of salt. Contamination of the water may cause widespread red maple stress and even mortality.

## WILDLIFE

Mixed hardwood forest and hardwood swamp make up the majority of the area. Pine Brook is located west of the project site. Two small openings exist, each have a trail that leads to Chestnut Hill Road. A small conifer stand (mostly spruce) is located between these openings. This stand provides excellent wildlife cover. Deer tracks and browse evidence were observed. A variety of other mammals and birds will also find this area attractive.

Building the Town garage on this site will have a negative effect on the wildlife and habitat. However, if the surrounding area is left undisturbed, it will still provide wildlife habitat. The garage could be constructed where openings already exist. To avoid disturbing the wetlands, the opening farthest away would be the best choice.

## FISHERIES CONCERNS

The Town proposes to construct a maintenance garage on the parcel adjacent to a major wetland on Pine Brook. As part of the Salmon River watershed, the Pine Brook wetland represents an important resource. Much of the Salmon River watershed is hilly and characterized by rapid run-off. The Pine Brook wetlands are extremely important as water retention areas which provide flow augmentation during low flow periods.

The major concern from a fisheries viewpoint in the Town's proposal is the need to store road salt on site at the garage. Unless the salt is stored on an impermeable covered surface, high sodium levels reducing the water quality in Pine Brook are a possibility. The state of Connecticut has a vested interest in the Salmon River watershed having

purchased thousands of acres along the riparian corridor in an effort to preserve water quality. Pine Brook is stocked annually with several hundred trout by the state.

## PLANNING CONCERNS

The proposed site is located in the northeast corner of a 165 acre tract of land owned by the Town of East Hampton. It is an attractive location for a Town garage, as it would permit easy access to the Town's major roadways. The property is located in a rural residential zone. The proposed project would be permitted, as a special exception, with the approval of the Planning and Zoning Commission, following a public hearing. The adjacent area is primarily undeveloped, although pockets of low density housing exist.

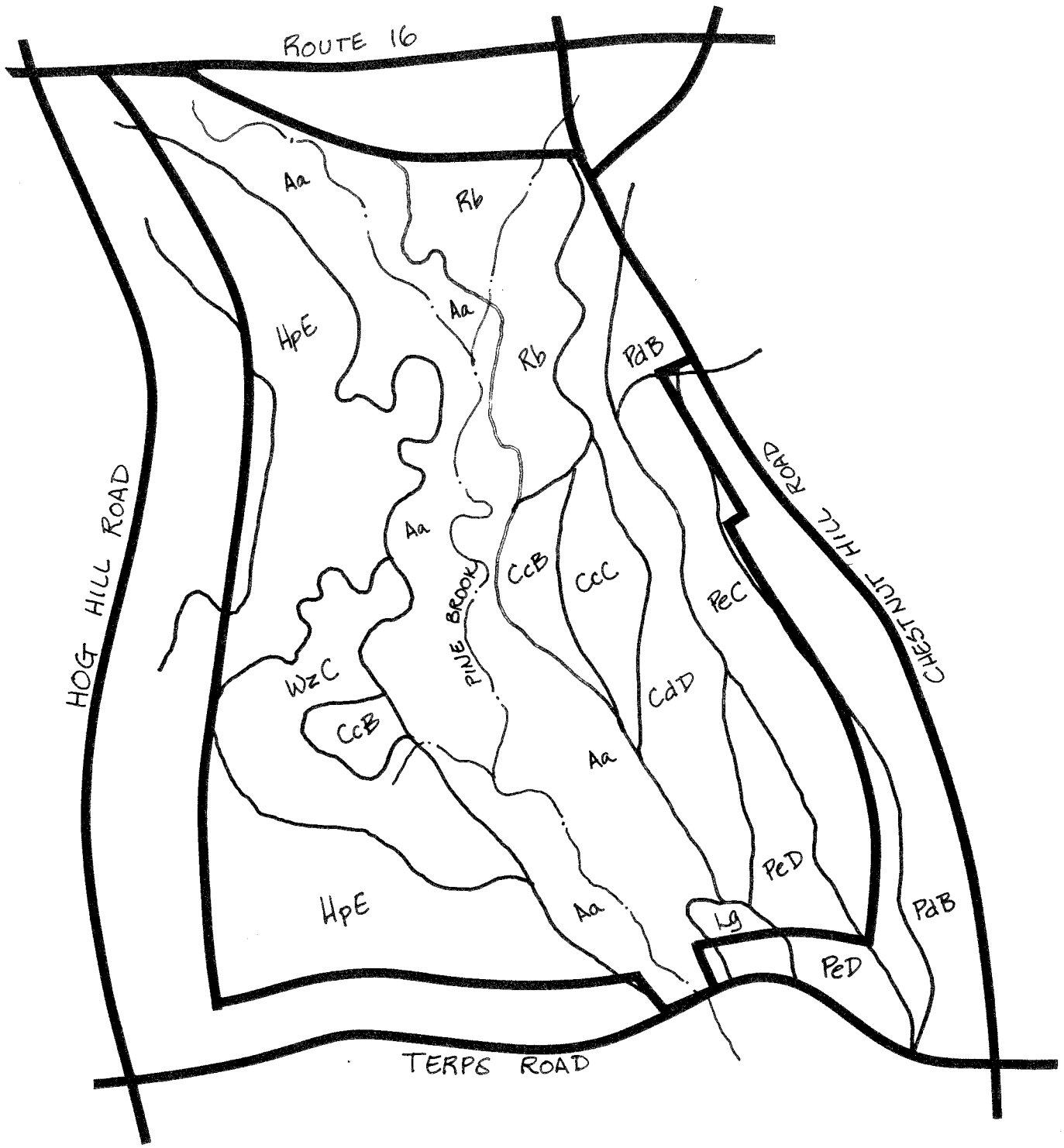
The entire parcel comprises a major portion of the primary and secondary recharge areas of the Pine Brook Aquifer Protection Zone. Section 6.14.2b of the Town's Zoning Regulations clearly prohibits the storage and loading of road salt in these areas. There is a potential for ground water contamination by the application of salt to access roads and driveways during the winter months, and by the leaching of salts from unprotected storage sites. Salt spilled during loading operations or washed from trucks also contributes sodium and chloride to ground water.

Public works garages are commonly used to store fuel and other oil-based products. Improper handling of stored materials, as well as the waste products associated with vehicle maintenance, may pose a potential threat to ground water quality.

The Town originally purchased the property as a possible site for a public water supply well. Since the proposed site is contained within the Pine Brook Aquifer Protection Zone, the development of the land for the purpose of building a Town garage could be inconsistent with the Town's natural resource protection goals.

# Appendix

# Soils


ROUTE 16
HOG HILL ROAD
CHESTNUT HILL ROAD
TERPS ROAD
PINE BROOK
Aa
Rb
HpE
CcB
CcC
PeC
WzC
CdD
PeD
PaB
Ly

PROJECT 1
Chestnut Hill Road
± 165 acres

| SYMBOL | NAME | LIMITATIONS: SMALL COMMERCIAL BUILDINGS | LIMITATIONS: LOCAL ROADS AND STREETS |
|---|---|---|---|
| Aa* | Adrian muck | Severe-wetness<br>Floods<br>Low strength | Severe-wetness<br>Floods<br>Low strength |
| CcB | Canton and Charlton very stony fsl's 3-8% | Moderate-slope<br>Large stones | Slight |
| CcC | Canton and Charlton very stony fsl's 8-15% | Severe-slope | Moderate-slope |
| CdD | Canton and Charlton extremely stony fsl's 15-35% | Severe-slope<br>Large stones | Severe-slope |
| PdB | Paxton and Montauk very stony fsl's 3-8% | Moderate-slope<br>Frost action | Moderate-frost action |
| PeC | Paxton and Montauk extremely stony fsl's 3-15% | Severe-slope<br>Large stones | Moderate-slope<br>Large stones<br>Frost action with Paxton |
| Rb* | Raypol silt loam | Severe-wetness<br>Frost action | Severe-wetness<br>Frost action |

fsl - fine sandy loam
* Inland wetland soils regulated under P.A. 155

## SOIL INTERPRETATIONS FOR URBAN USES

The ratings of the soils for elements of community and recreational development uses consist of three degrees of "limitations:" slight or no limitations; moderate limitations; and severe limitations. In the interpretive scheme various physical properties are weighed before judging their relative severity of limitations.

The user is cautioned that the suitability ratings, degree of limitations and other interpretations are based on the typical soil in each mapping unit. At any given point the actual conditions may differ from the information presented here because of the inclusion of other soils which were impractical to map separately at the scale of mapping used. On-site investigations are suggested where the proposed soil use involves heavy loads, deep excavations, or high cost. Limitations, even though severe, do not always preclude the use of land for devel opment. If economics permit greater expenditures for land development and the intended land use is consistent with the objectives of local or regional development, many soils and sites with difficult problems can be used.

### Slight Limitations

Areas rated as slight have relatively few limitations in terms of soil suitability for a particular use. The degree of suitability is such that a minimum o time or cost would be needed to overcome relatively minor soil limitations.

### Moderate Limitations

In areas rated moderate, it is relatively more difficult and more costly to correct the natural limitations of the soil for certain uses than for soils rated as having slight limitations.

### Severe Limitations

Areas designated as having severe limitations would require more extensive and more costly measures than soils rated with moderate limitations in order to overcome natural soil limitations. The soil may have more than one limiting characteristic causing it to be rated severe.

# About the Team

The Eastern Connecticut Environmental Review Team (ERT) is a group of professionals in environmental fields drawn together from a variety of federal, state, and regional agencies. Specialists on the Team include geologists, biologists, foresters, climatologists, soil scientists, landscape architects, archeologists, recreation specialists, engineers and planners. The ERT operates with state funding under the supervision of the Eastern Connecticut Resource Conservation and Development (RC&D) Area.

The Team is available as a public service at no cost to Connecticut towns.

## PURPOSE OF THE TEAM

The Environmental Review Team is available to help towns and developers in the review of sites proposed for major land use activitis. To date, the ERT has been involved in reviewing a wide range of projects including subdivisions, sanitary landfills, commercial and industrial developments, sand and gravel operations, elderly housing, recreation/open space projects, watershed studies and resource inventories.

Reviews are conducted in the interest of providing information and analysis that will assist towns and developers in environmentally sound decision-making. This is done through identifying the natural resource base of the project site and highlighting opportunities and limitations for the proposed land use.

## REQUESTING A REVIEW

Environmental reviews may be requested by the chief elected officials of a municipality or the chairman of town commissions such as planning and zoning, conservation, inland wetlands, parks and recreation or economic development. Requests should be directed to the Chairman of your local Soil and Water Conservation District. This request letter should include a summary of the proposed project, a location map of the project site, written permission from the landowner allowing the Team to enter the property for purposes of review, and a statement identifying the specific areas of concern the Team should address. When this request is approved by the local Soil and Water Conservation District and the Eastern Connecticut RC&D Executive Council, the Team will undertake the review on a priority basis.

For additional information regarding the Environmental Review Team, please contact Jeanne Shelburn (774-1253), Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, P.O. Box 198, Brooklyn, Connecticut 06234.